

Two new species of Catantopidae (Orthoptera: Acridoidea) from China

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Abstract: Two new species of Catantopidae are described, i.e. *Ranacris jinpingensis* sp. nov. and *Caryanda atrageniculata* sp. nov.

Key words: grasshoppers; taxonomy; *Ranacris jinpingensis*; *Caryanda atrageniculata*

中国斑腿蝗科二新种记述(直翅目: 蝗总科)

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摘要: 记述采自云南及贵州地区斑腿蝗科 2 新种, 即金平蛙蝗 *Ranacris jinpingensis* sp. nov. 及黑膝卵翅蝗 *Caryanda atrageniculata* sp. nov.。金平蛙蝗近似于白斑蛙蝗 *Ranacris albicornis* You et Li, 1983, 主要区别为: 1) 头顶前缘中央凹陷; 2) 缺头侧窝; 3) 雄性缺尾片; 4) 雄性前胸背板沟前区长为沟后区长长的 2.9–3 倍; 5) 雌性下生殖板后缘中央三角形突出。黑膝卵翅蝗近似于湖北卵翅蝗 *Caryanda hubeiensis* Wang, 1995, 主要区别为: 1) 头顶在复眼前最宽处为长的 2 倍; 2) 触角中段一节的长度为宽度的 3 倍; 3) 复眼纵径为横径的 1.9 倍; 4) 小尾片三角形, 突出; 5) 下膝侧片顶锐角形; 6) 雄性下生殖板背面观不延长, 顶尖; 7) 后足胫节黄褐色。

关键词: 蝗虫; 分类; 金平蛙蝗; 黑膝卵翅蝗

Introduction

The genus *Ranacris* was erected by You and Li in 1983, with *Ranacris albicornis* You & Li, 1983 as the type species, distributed in Daqing Mountain area. At that time, there was only one species in the genus *Ranacris*. The genus *Caryanda* was erected by Stål in 1878, with *Caryanda spuria* (Stål, 1861) [= *Acridium spurium* Stål, 1861] as the type species. The genus *Ranacris* is a big genus in the Catantopidae, with 73 known species, 58 of them distributed in China. They are mainly distributed in south China, including Yunnan, Sichuan, Chongqing, Hubei, Hunan, Guangdong, Guangxi, Zhejiang, Fujian and Xizang provinces.

During August and September of 2012, two new species of Catantopidae were found in the orthopteran faunal survey in Yunnan and Guizhou Province and are described below.

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The type specimens are deposited in the Institute of Zoology, Shaanxi Normal University.

Taxonomy

1. *Ranacris jinpingensis* sp. nov. (Figs. 1–6)

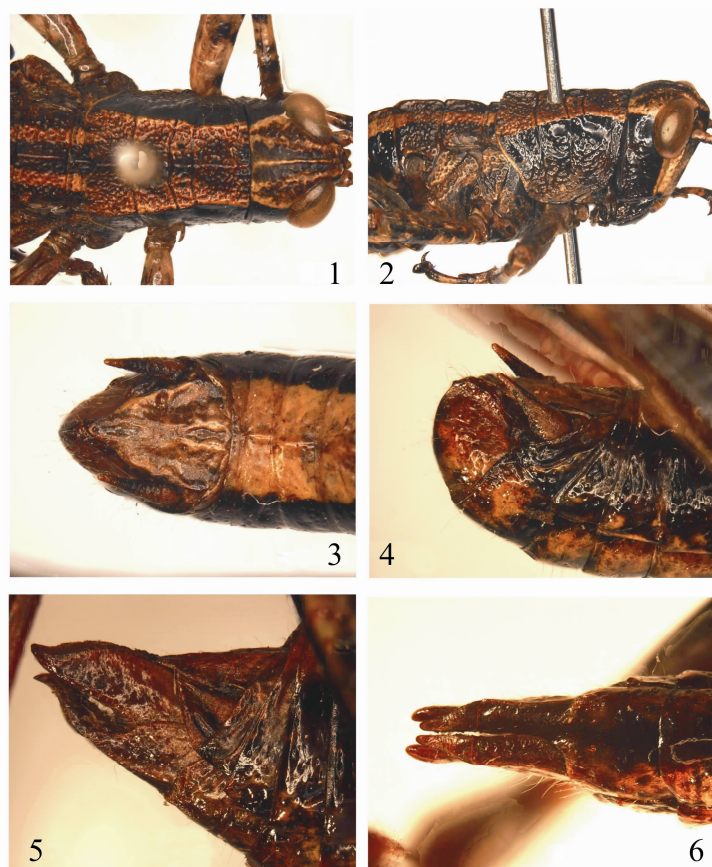
Male. Body median size. Back of head, pronotum, mesonotum, metanotum and tergum of 1st abdominal segment with big thick dense punctations. Head large, shorter than pronotum; vertex broad, anterior margin concave in the middle, median carina extremely thick and prominent; frons slightly oblique in profile, lateral margin of frontal ridge extremely prominent, obviously so in dorsal view; longitudinal groove deep; lateral carina of frons straight. Antennae filiform, slender, reaching base of hind femur, 24 segments, length of middle segments about 3–4 times its width. Eyes ovate, longitudinal diameter 1.7 times its horizontal diameter, and 1.25 times the length of subocular furrow. Pronotum long, anterior margin straight, middle of posterior margin with an obvious cove, median carina obvious, severed by three transverse furrows, lateral carinae arc curved in prozona, posterior transverse sulcus located in postmedian of pronotum, length of prozona 2.9–3.0 times as that of metazona; length of lateral lobes of pronotum greater than its width, anterior lower angle broad arcuate, posterior lower angle rounded. prosternal spines slender, conical, apex sharp; length of mesosternal lobes almost equal to its width, interspace of mesosternal lobes trapezoidal; lateral lobes of metasternum divided; without tegmina and wings; upper margin of median carina of hind femur finely denticulate, median carina formed with spine at the end, top of lower kneelobe rounded; outer side of hind tibia with 7 spines, inner side with 8 spines, without outer apical spines; length of the third hind tarsus equal to the sum of the first and second; arolium large, surpassing half length of the claw; tympanum organ developed, rounded; terminal tergum of abdomen longitudinally divided, but not formed as furcula. Epiproct long triangular, apex sharp, lateral margin with a small protuberance in the middle, middle of tergum with longitudinal groove until the end. Cerci long cylindrical, reaching the apex of epiproct, apex sharp. Subgenital plate short conical, apex obtuse.

Body dark yellowish brown. Antennae brown, terminal segments black. Frons yellowish brown, back of head brown, with a black longitudinal band on both sides of median carina; gena and part behind eyes black; back of pronotum brown, lateral lobes black; mesosternum and metasternum black, with four big yellowish brown pots. Fore and middle femur and tibia brown, with two black horizontal bands; upper side of hind femur yellowish brown, outer and inner side yellowish brown, with two black horizontal spots, lower outer side brown, lower inner side reddish brown, knee dark brown; hind tibia red brown, yellowish brown at the end; hind tarsus red brown. Abdomen brown, black in profile.

Female. Body larger than male. Longitudinal diameter of eyes 2.0 times its horizontal diameter, 1.2 times the length of subocular furrow. Length of prozona of pronotum 2.8 times that of metazona. Lateral lobes of metasternum divided. Epiproct long triangular, with longitudinal groove in the middle. Ovipositor slender, with length 3.5 times its width, upper inner side and outer side with blunt tooth. Subgenital plate almost square, posterior margin triangular protuberant in the middle. Ventral basivalvular plate rectangular, with fine punctum. With same colour as male, but slightly deeper.

Measurements. Length of body: ♂18.0–19.0 mm; ♀23.5–24.0 mm. Length of pronotum:

♂ 5.0–5.4 mm; ♀ 6.2–6.5 mm. Length of hind femur: ♂ 11.5–12.0 mm, ♀ 12.0–14.0 mm.



Figures 1–6. *Ranacris jinpingensis* sp. nov. 1–4. ♂; 5, 6. ♀. 1. Head and pronotum, dorsal view; 2. Head and pronotum, lateral view; 3. Terminalia, dorsal view; 4, 5. Terminalia, lateral view; 6. Terminalia, ventral view.

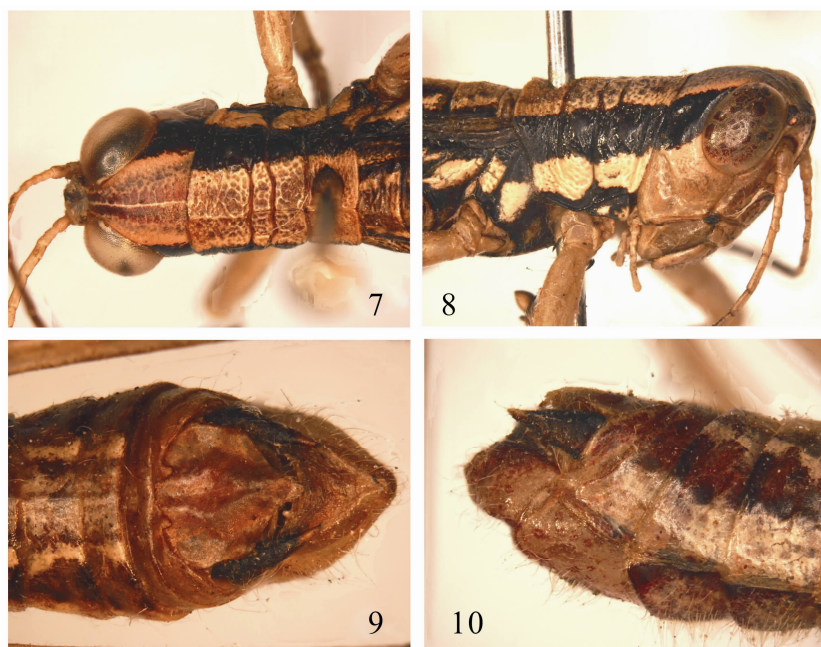
Holotype. ♂, **China**, Yunnan, Jinping, 103°2'E, 22°4'N, 07-IX-2012, collected by Xun BIAN; **Paratypes.** 1♂2♀, same data as holotype.

Remarks. This new species is allied to *Ranacris albicornis* You & Li, 1983, the main differences are listed in table 1.

Etymology. The specific epithet is derived from the type locality “Jinping”.

Table 1. Differences between *R. albicornis* and *R. jinpingensis*

	<i>R. albicornis</i>	<i>R. jinpingensis</i>
Frontal margin of vertex	Rounded	Concave in the middle
Fastigial foveolae	Triangular	Absent
Furculae of male	Small, triangular	Absent
♂, length of prozona to length of metazona	3.5–3.7 times	2.9–3.0 times
♀, posterior margin of subgenital plate	Slightly concave in the middle	Triangular protuberant in the middle

2. *Caryanda atrageniculata* sp. nov. (Figs. 7–10)

Figures 7–10. *Caryanda atrageniculata* sp. nov. ♂. 7. Head and pronotum, dorsal view; 8. Head and pronotum, lateral view; 9. Terminalia, dorsal view; 10. Terminalia, lateral view.

Male. Body median size. Head large but short, vertex almost triangular, oblique, anterior margin flat, slightly concave, width of vertex before eyes 2.0 times its length; frons oblique in profile, lateral margin of frontal ridge almost parallel, with longitudinal groove along all its length; lateral carina of frons straight. Antennae filiform, slender, reaching base of hind femur, length of middle segments about 3 times its width. Eyes ovate, longitudinal diameter 1.9 times its horizontal diameter, and 2.5 times length of subocular furrow. Pronotum cylindrical, anterior margin slightly concave in the middle, posterior margin with wide cove in the middle; median carina obvious, severed by three transverse furrows; posterior transverse sulcus located in postmedian of pronotum, length of prozona 2.5 times that of metazona; length of lateral lobes of pronotum greater than its width, anterior lower angle obtuse, posterior lower angle right angled. Prosternal spines slender, conical, apex sharp; length of mesosternal lobes almost equal to its width, length of interspace of mesosternal lobes 1.6 times its minimum width. Metasternal lobes divided. Tegmina scalelike, slender, laterally located, broadly divided in dorsal view, with length 3.75 times its width, slightly surpassing posterior margin of 1st tergum of abdomen. Hind femur symmetrical, with length 5.5 times its width, upper median carina smooth, forming spine shape at the end, apex of lower kneelobe acutely angled. Hind tibia with 8–9 spines on outer side and 10 spines on inner side, with both inner and outer apical spine. Length of first hind tarsus almost equal to that of the third, arolium large, surpassing the top of the claw. With well developed tympanum on the 1st abdominal segment, hole almost rounded. Terminal tergum of abdomen chapped in the middle, with small triangular furcula. Epiproct long triangular, apex sharp, with longitudinal groove in the middle

until the end. Cerci long cylindrical, reaching the apex of epiproct, apex sharp. Subgenital plate short conical, not extended, apex sharp.

Body brownish green; antennae brown, segments behind eyes black; upper part of lateral lobes of pronotum with a wide black band, lower margin black; tegmina black; hind femur brownish green, knee black; hind tibia yellowish brown, basal part black; both sides of abdomen with wide black longitudinal bands, with two black thin longitudinal bands; cerci black, apex light-colored.

Female. Unknown.

Measurements. Length of body: ♂17.0–18.0 mm. Length of pronotum: ♂3.5–4.0 mm. Length of tegmina: ♂3.5–4.0 mm. Length of hind femur: ♂11.0–11.2 mm.

Holotype. ♂, **China**, Guizhou, Tongzi, 106°8'E, 28°3'N, 11-VIII-2012, collected by Weian DENG. **Paratype.** 1♂, same data as holotype.

Remarks. This new species is allied to *Caryanda hubeiensis* Wang, 1995, the main differences are listed in table 2.

Etymology. The specific epithet is derived from the Latin word “atra” (black) and “geniculatus” (bent knee).

Table 2. Differences between *Caryanda atrageniculata* sp. nov. and *C. hubeiensis*

	<i>C. hubeiensis</i>	<i>C. atrageniculata</i>
Width of vertex before eyes to its length	3 times	2 times
Longitudinal diameter of eyes to its horizontal diameter	1.4 times	1.9 times
Small furcula	Rounded, slightly protruded	Triangular, protruded
Apex of lower kneelobe	Spinelike	Arc-shaped
Subgenital plate in dorsal view	Extended, apex blunt	Not extended, apex sharp
Hind tibia	Bluish green	Yellowish brown

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